Appl. No. 10/735,482
Amdt. dated March 19, 2009

PATENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Currently Amended) In an object-oriented environment, a method of testing a software program comprising a plurality of components executed on one of a plurality of operating systems **for compliance with Americans with Disabilities Act (ADA) requirements**, the method comprising:

determining a cursor position;

ascertaining, based on the cursor position, an accessibility context associated with the cursor position;

identifying a component by reference to the accessibility context, wherein the accessibility context has an accessibility role that defines a set of properties, including at least one program method, associated with the accessibility context, wherein the identified component comprises the set of properties**, and wherein the accessibility context further includes a set of actions included in an action list which are configured to emulate a disabled user's actions while interfacing with the software program**;

recording, in real time and independent of any of the plurality of operating systems, the identified accessibility context, wherein the recording of the identified accessibility context is an operating system independent process;

retrieving the stored accessibility context;

searching a component hierarchy for an object having an accessibility context matching the retrieved accessibility context; and

playing back an event based on the stored accessibility context to test the event in reference to the accessibility context.

2. - 3. (Canceled)

4.   (Previously Presented) A method as recited in claim 1, wherein the object comprises the set of properties, including the at least one program method, defined by the accessibility role.

5.   (Original) A method as recited in claim 1, wherein the cursor position is determined in response to a trigger.

6 .   (Original) A method as recited in claim 5, wherein the trigger comprises the execution of the program method a first time.

7.   (Original) A method as recited in claim 6, wherein replaying an event comprises executing the program method a second time.

8.   (Original) A method as recited in claim 5, wherein the trigger comprises a cursor entering a field.

9.   (Original) A method as recited in claim 5, wherein the trigger comprises a cursor exiting a field.

10.   (Original) A method as recited in claim 5, wherein the trigger comprises a user manipulating a mouse button.

11.   (Original) A method as recited in claim 5, wherein the trigger comprises a user manipulating a hotkey on a keyboard.

12.   (Original) A method as recited in claim 11, wherein the user manipulating a hotkey simulates execution of the program method, and wherein replaying an event comprises executing the program method a first time.

13.   (Original) A method as recited in claim 1, further comprising creating a record of the identified component.

14.   (Original) A method as recited in claim 13, further comprising manually modifying the record of the component.

15.   (Original) A method as recited in claim 14, wherein manually modifying the record of the component comprises changing a property of the component.

16.   (Original) A method as recited in claim 14, wherein manually modifying the record of the component comprises changing an accessibility role of the component.

17.   (Original) A method as recited in claim 14, wherein manually modifying the record of the component comprises identifying a different program method to be executed in replaying an event.

18.   (Original) A method as recited in claim 13, wherein the record is incorporated in a file.

19.   (Original) A method as recited in claim 18, wherein the file is an XML file.

20.   (Original) A method as recited in claim 1, wherein the component comprises a button.

21.   (Original) A method as recited in claim 20, wherein the program method performs an action related to the selection of the button.

22.   (Original) A method as recited in claim 1, wherein the component comprises a window.

23.   (Original) A method as recited in claim 22, wherein the program method performs an action selected from the group consisting of opening the window, closing the window, resizing the window, and moving the window.

24.   (Original) A method as recited in claim 1, wherein the component comprises a selectable component.

25.   (Original) A method as recited in claim 24, wherein the program method performs an action selected from the group consisting of selecting the component and deselecting the component.

26.   (Original) A method as recited in claim 1, wherein the component comprises a portion of text.

27.   (Original) A method as recited in claim 26, wherein the program method performs an action selected from the group consisting of cutting the portion of text, copying the portion of text, pasting the portion of text and formatting the portion of text.

28.   (Original) A method as recited in claim 1, further comprising, performing, for a plurality of iterations, the steps of determining a cursor position relative to a component, ascertaining an accessibility context, and identifying the component.

29.   (Original) A method as recited in claim 28, further comprising creating a plurality of records, each of the plurality of records comprising a component identified in one of the plurality of iterations.

30.   (Original) A method as recited in claim 29, further comprising, with respect to each of the plurality of records, searching a component hierarchy for an object having an accessibility context matching the identified component's accessibility context and replaying an event by calling a program method defined by an accessibility role for the object.

31.   (Original) A method as recited in claim 1, wherein replaying the event comprises displaying a result of the event on a display device.

32.   (Original) A method as recited in claim 1, wherein replaying the event comprises writing a result of the event to a file.

33.   (Original) A method as recited in claim 1, further comprising, after replaying the event, evaluating a result of the event.

34.   (Original) A method as recited in claim 33, wherein evaluating a result of the event comprises comparing the result of the event with an anticipated result of the event.

35.   (Previously Presented) A method as recited in claim 1, further comprising analyzing the event to determine whether the component complies with legal requirements for accommodating persons with disabilities.

36.   (Currently Amended) In an object-oriented environment, a method of testing a software program comprising a plurality of components **for compliance with Americans with Disabilities Act (ADA) requirements**, each component comprising an accessibility context capable of identifying the component within the software program executed on one of a plurality of operating systems, the method comprising:

determining a cursor position;

ascertaining, based on the cursor position, an accessibility context associated with the cursor position, the accessibility context having an accessibility role that defines a set of properties, including at least one program method, associated with the accessibility context;

identifying a component by reference to the accessibility context, the component comprising the set of properties, including the at least one program method, defined by the accessibility role**, and wherein the accessibility context further includes a set of actions included in an action list which are configured to emulate a disabled user's actions while interfacing with the software program**;

recording, in real time and independent of any of the plurality of operating systems, the identified accessibility context, wherein the recording of the identified accessibility context is an operating system independent process;

retrieving the stored accessibility context;

searching a component hierarchy for an object having an accessibility context matching the retrieved accessibility context, such that the object comprises the set of properties, including the at least one program method, defined by the accessibility role; and

playing back an event based on the stored accessibility context to test the event in reference to the accessibility context.

37.   (Original) A method as recited in claim 36, further comprising creating a record of the identified component, the record including the component's accessibility role.

38.   (Currently Amended) A computer program product for testing a software program comprising a plurality of components executed on one of a plurality of operating systems **for compliance with Americans with Disabilities Act (ADA) requirements**, the computer program product being embodied in a computer readable medium and comprising instructions executable by a computer to:

determine a cursor position;

ascertain, based on the cursor position, an accessibility context associated with the cursor position;

identify a component by reference to the accessibility context, wherein the accessibility context has an accessibility role that defines a set of properties, including at least one program method, associated with the accessibility context, wherein the identified component comprises the set of properties**, and wherein the accessibility context further includes a set of actions included in an action list which are configured to emulate a disabled user's actions while interfacing with the software program**;

search a component hierarchy for an object having an accessibility context matching the component's accessibility context;

record, in real time and independent of any of the plurality of operating systems, the identified accessibility context, wherein the recording of the identified accessibility context is an operating system independent process;

retrieve the stored accessibility context; and

play back an event based on the stored accessibility context to test the event in reference to the accessibility context.

39.   (Currently Amended) A system for testing a software program comprising a plurality of components executed on one of a plurality of operating systems **for compliance with Americans with Disabilities Act (ADA) requirements**, the system comprising:

a processor;

an input device in communication with the processor; and

a computer readable medium in communication with the processor, the computer readable medium comprising instructions executable by the processor to:

determine a cursor position;

ascertain, based on the cursor position, an accessibility context associated with the cursor position;

identify a component by reference to the accessibility context, wherein the accessibility context has an accessibility role that defines a set of properties, including at least one program method, associated with the accessibility context, wherein the identified component comprises the set of properties**, and wherein the accessibility context further includes a set of actions included in an action list which are configured to emulate a disabled user's actions while interfacing with the software program**;

record, in real time and independent of any of the plurality of operating systems, the identified accessibility context, wherein the recording of the identified accessibility context is an operating system independent process;

retrieve the stored accessibility context;

search a component hierarchy for an object having an accessibility context matching the retrieved accessibility context; and

play back an event based on the stored accessibility context to test the event in reference to the accessibility context.

40.   (Original) A system as recited in claim 39, wherein the cursor position is determined in response to a trigger.

41.   (Original) A system as recited in claim 40, wherein the input device is a mouse having at least one button, and wherein the trigger comprises manipulation of the button.

42.   (Original) A system as recited in claim 40, wherein the input device is a keyboard having at least one hotkey, and wherein the trigger comprises manipulation of the hotkey.

43.   (Original) A system as recited in claim 39, further comprising a display device in communication with the processor, wherein replaying the event comprises displaying the result of the event on the display device.

44.   (Canceled)

45.   (Currently Amended) A system for testing a software program comprising a plurality of components executed on one of a plurality of operating systems **for compliance with Americans with Disabilities Act (ADA) requirements**, the system comprising:
        means for determining a cursor position;
        means for ascertaining, based on the cursor position, an accessibility context associated with the cursor position;
        means for identifying a component by reference to the accessibility context, wherein the accessibility context has an accessibility role that defines a set of properties, including at least one program method, associated with the accessibility context, wherein the identified component comprises the set of properties**, and wherein the accessibility context further includes a set of actions included in an action list which are configured to emulate a disabled user's actions while interfacing with the software program**;

means for recording, in real time and independent of any of the plurality of operating systems, the identified accessibility context, wherein the recording of the identified accessibility context is an operating system independent process;

means for retrieving the stored accessibility context;

means for searching a component hierarchy for an object having an accessibility context matching the retrieved accessibility context; and

means for play back an event based on the stored accessibility context to test the event in reference to the accessibility context.

46.   (Currently Amended) In an object-oriented environment, a method of determining a software program's compliance with legal requirements for accommodating persons with disabilities, the software program comprising a plurality of components executed on one of a plurality of operating systems, the method comprising:

determining a cursor position;

ascertaining, based on the cursor position, an accessibility context associated with the cursor position;

identifying a component by reference to the accessibility context, wherein the accessibility context has an accessibility role that defines a set of properties, including at least one program method, associated with the accessibility context, wherein the identified component comprises the set of properties**, and wherein the accessibility context further includes a set of actions included in an action list which are configured to emulate a disabled user's actions while interfacing with the software program**;

recording, in real time and independent of any of the plurality of operating systems, the identified accessibility context, wherein the recording of the identified accessibility context is an operating system independent process;

retrieving the stored accessibility context;

searching a component hierarchy for an object having an accessibility context matching the retrieved accessibility context;

playing back the stored accessibility context to test functionality of the component in reference to the accessibility context and generating output with results of the functionality test;

analyzing the results to evaluate the component's compliance with legal requirements for accommodating persons with disabilities; and

reporting, to a user, a report of an analysis.

47.   (Original) A method as recited in claim 46, wherein analyzing the object comprises replaying an event by calling a program method defined by an accessibility role for the object.

48.   (Original) A method as recited in claim 46, wherein analyzing the object comprises analyzing a set of properties of the object.

49.   (Original) A method as recited in claim 46, wherein analyzing the object comprises evaluating the object's accessibility context to determine whether the component properly implements accessibility features.

50.   (Original) A method as recited in claim 46, wherein analyzing the object comprises evaluating the object's accessibility role to determine whether the component properly implements accessibility features.